REMARKS

The above amendments have been made to incorporate the changes made under PCT Article 34 amendment, to remove the multiple dependency of the claims and to place the application in better condition for examination.

If any fees are due in connection with this paper, please charge our Deposit Account No. 50-2866.

Respectfully submitted,

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SGA/yap

air required for manufacturing oxygen gas of 10,000m^3/h (Normal) is calculated as follows. When recovery efficiency of oxygen gas is 97%, the amount of air is theoretically calculated by the formula of (10,000 ÷ 0.500) ÷ 0.97. As a result, about 20,600m^3/h (Normal) is determined as the air required, which is reduced to about 41% as compared with that required in the conventional apparatus mentioned at the beginning of the present specification. Further, when oxygen gas of 10,000m^3/h (Normal) is produced, the power required for working the oxygen/air compressor 11 is reduced to about 2000kW, and it is thought that the power required for working the air compressor 1 is about 300kW, the power required for working the vacuum pump 4 is about 900kW, and the electrical power for the electrical heater 41 is about 200kW. The total amount is about 3400kW, reduced to about 70% as compared with the conventional apparatus. Therefore, energy can be saved by 30% or more.

Further, in this embodiment, the first adsorption towers 2, 3 are provided for increasing the concentration of the oxygen gas in the compressed air obtained by compressing air as raw material by the air compressor 1. The thus obtained gas is fed through the oxygen/air compressor 11 and the main heat exchanger 21 into the high-pressure rectification tower 23 and the low-pressure rectification tower 28. For this reason, the amount of gas to be circulated through each device such as the main heat exchanger 21 and both of the rectification towers 23,

Marked-up version showing changes to page 17.

air required for manufacturing oxygen gas of 10,000m^3/h (Normal) is calculated as follows. When recovery efficiency of oxygen gas is 97%, the amount of air is theoretically calculated by the formula of $(10,000 \div 0.500) \div 0.97$. As a result, about 20,600m^3/h (Normal) is determined as the air required, which is reduced to about 41% as compared with that required in the conventional apparatus mentioned at the beginning of the present specification. Further, when oxygen gas of 10,000m^3/h (Normal) is produced, the power required for working the oxygen/air compressor 11 is reduced to about 2000kW, and it is thought that the power required for working the ~~oxygen/~~air compressor 1 is about 300kW, the power required for working the vacuum pump 4 is about 900kW, and the electrical power for the electrical heater 41 is about 200kW. The total amount is about 3400kW, reduced to about 70% as compared with the conventional apparatus. Therefore, energy can be saved by 30% or more.

Further, in this embodiment, the first adsorption towers 2, 3 are provided for increasing the concentration of the oxygen gas in the compressed air obtained by compressing air as raw material by the air compressor 1. The thus obtained gas is fed through the oxygen/air compressor 11 and the main heat exchanger 21 into the high-pressure rectification tower 23 and the low-pressure rectification tower 28. For this reason, the amount of gas to be circulated through each device such as the main heat exchanger 21 and both of the rectification towers 23,